



Article

Do Tourists' Preferences Match the Host Community's Initiatives? A Study of Sustainable Tourism in One of Africa's Oldest Conservation Areas

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Abstract: Involvement of stakeholders in sustainable tourism, particularly in developing countries, is crucial for the success of tourism development. However, its implementation is often criticized for not considering stakeholders' needs. This study explores tourists' preferences for tourism activities, designed by local stakeholders, in one of the oldest conserved parks in East Africa—the Menagesha Suba Forest, in the Central Highlands of Ethiopia. The study area is endowed with natural, cultural and historical, yet undeveloped, tourist attractions. The host community benefits little from tourism and is in continual conflict with the park administration. This study aims to provide new insights on potential engagement of stakeholders in sustainable tourism planning. In particular, we explored tourists' preferences for activities designed by local stakeholders, as well as their preferences concerning the improvement of the park infrastructure. The local community has been engaged in group discussions to design community involvement activities in tourism, while park guest books have been consulted to identify infrastructure improvements suggested by tourists. A survey that embedded a discrete choice experiment was conducted among tourists that visited the Menagesha Suba Forest. Data were analyzed with mixed logit and latent class models. We identified preferences for infrastructure improvement in the park. Tourists' preferences are heterogeneous and vary with their profile as foreigners, foreign residents, and locals. Furthermore, the study indicates that there is a mismatch between tourists' preferences and activities designed by the host community for their engagement in tourism. Tourists might be unaware of the importance of such activities for local communities. On the other hand, the findings also imply that increasing host residents' awareness of tourism and tourists' preferences is required, prior to tourism activities planning. Hence, sustainable tourism planning and development needs to understand perception gaps between host residents and tourists for its smooth implementation.

Keywords: stakeholders' engagement; sustainable tourism; choice experiment; Menagesha Suba Forest; Ethiopia

1. Introduction

The tourism industry can contribute to economic growth and job creation, and has the potential to promote social development [1]. A successful tourism industry in a destination can raise funds, improve local and tourist awareness of biodiversity and conservation issues, as well as discourage local people from unsustainable livings [2]. Yet, tourism can also cause social dislocation, loss of cultural heritage, economic dependence, and ecological degradation. The tourism industry has responded to these challenges by introducing the concept of sustainable tourism, thus aiming to protect the environment and the wellbeing of the society at the destination [2,3]. However, the concept has been criticized for its uneven concentration on ecological and economic disciplines, and leaving out the social aspects of sustainability [4,5].

Sustainable tourism requires to address multiple issues, including economic health, satisfying guests and ensuring community well-being [6], but many sustainable tourism policies fail to find a balance between local community developmental needs and local opportunities for tourism development. According to stakeholder theory, it is important to consider all stakeholder views into planning activities [7]. One needs to identify and understand the interest of all stakeholders, even if not all stakeholders can be involved equally in the decision making process [7]. Failure to identify the interest of even a single primary stakeholder group may result in the failure of the process of establishing sustainable tourism [8].

Identifying who constitutes a ‘stakeholder’ can be challenging, especially when there is a wide range of stakeholders with specific interests. Different groups of stakeholders can often be identified [9–11], but stakeholder research sometimes tends to assess only one stakeholder group at a time [12–25]. An increasing amount of research considers the views of different stakeholder groups and stress that, for sustainable tourism, it is of paramount importance to understand both residents and visitor attitudes [10,11,26–31].

Even when stakeholders are engaged, they are often regarded as a monolithic group instead of being differentiated with different preferences [29,32,33]. However, this assumption of homogeneous preferences within stakeholder groups is increasingly challenged in recent years [34]. This calls for a differentiation and categorization within stakeholder groups according to their preferences, attitudes and behaviors [35–37].

Assessing and incorporating differentiated preferences of all relevant stakeholder groups in planning for sustainable tourism is challenging and hence might require a combination of methods for stakeholder involvement [38]. Primary and secondary data sources are sometimes combined, as well as qualitative and quantitative approaches [39].

In developing countries, planning and development of sustainable tourism is often criticized for failing to address needs of local stakeholders [40–44], even though many rely on natural resources. As a result, stakeholders sometimes oppose initiatives taken to boost the tourism sector, compromises their implementation and long-term success [45,46]. This can, among others, be attributed to the fact that stakeholders are sometimes recipients of sustainable tourism plans, but not active participants of the planning process [47,48]. Nevertheless, some studies point that sustainable tourism development cannot be achieved without the involvement of stakeholders from the start and participation of stakeholders in the initial tourism planning [49–52].

In Ethiopia, conflicting interests of stakeholders is one of the obstacles that hinders initiatives of sustainable tourism development. Several tourism projects have failed during implementation, contrary to their great potential, due to lack of inclusive stakeholders involvement and consensus among stakeholder groups [53]. The tourism section in the Menagesha Suba Forest, close to Addis Ababa, Ethiopia, has been struggling due to long-term conflicts over resource and benefit sharing between the local community and the forest managers. Locals depend on the forest for fuelwood, charcoal, and timber. As a result, the forest biodiversity and ecosystem services have been under threat despite its high importance for conservation given that it contains very old trees due to restoration efforts approximately 400 years ago [54]. Thus, the forest area has good tourism potential, and such

developments might help to preserve the remaining forest resources by driving local development and thus reducing poverty, in turn reducing dependence on forest goods. Yet the existing infrastructure is poor and this has been a common complaint of visitors.

The objective of this study was to investigate tourists' preferences towards tourism development activities that were proposed by both host community and tourists. The local community had already been involved in group discussions for designing tourism development plan (activities) for community engagement in tourism. It was expected that tourists would prefer development activities forwarded by the local community, but their preferences would be heterogeneous and influenced by their origin. Tourists' perceptions on infrastructure service of the park had been consulted from guest books for feedback to design activities for infrastructure improvement. Prioritized activities by both the host residents and tourists were used to formulate attributes for community involvement in tourism and infrastructure improvements respectively. Choice experiments has been used to elicit tourists' preferences for hypothetical community participation and infrastructure improvement scenarios.

This study could make an important contribution to the field of sustainable tourism by providing new information that can assist managers in protected areas, policy makers, local community, and entrepreneurs. Particularly in East Africa, the study outcome would be useful, where involvement of stakeholders in sustainable tourism is at the early stage [55]. Additionally, this paper contributes to the few, but increasing, number of choice experiment studies carried out in developing countries [56]. Furthermore, this study can yield important insights on how forest management plans for resource conservation could consider both the local community's, as well as tourists', preferences to develop a sustainable tourism. This also would benefit the local community and become a driver for conservation.

2. The Study Area

The Menagesha Suba Forest is located 45 km west of Addis Ababa, the capital of Ethiopia, situated in the central highlands of Ethiopia (Figure 1). The state forest covers 3530 ha of forested area and is accessible by roads passing through either the towns of Holetta or Sebeta. Tourism development in the Menagesha Suba Forest is in an initial phase. The current tourism infrastructure facilities and services are of poor quality. Although the park is located close to Addis Ababa, dirt roads towards the forest village and low availability of public transport are some of the challenges that hinder easy access. There is only one guest house, and there is not any information center at the park. Moreover, there is a lack of promotion and information provision of the park as a tourism destination, which forms an obstacle for more tourists to visit the area.

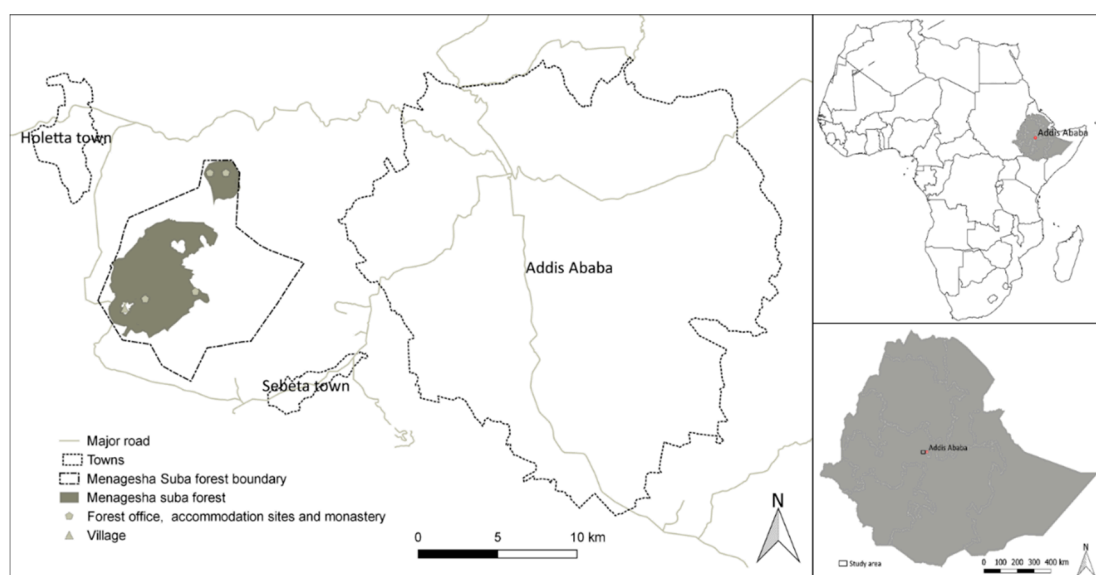


Figure 1. Map of the study area, in central highlands of Ethiopia.

The highest annual number of visitors to the Menagesha Suba Forest was 5830, in 2012, and the number of visitors has been decreasing recently. Recent political unrest in the region, poor facilities in the forest park, and the focus of the park administration on timber production might have had adverse effects. The community living adjacent to the Menagesha Suba Forest is agrarian with subsistence agriculture as the basic livelihood activity. Agricultural land productivity is low, and the dependence on the park's forest products is high [57]. For example, Duguma [58] found that around 31% of the households were located illegally inside the forest area and strongly relied on the forest for fuelwood, charcoal, and timber. The current management approach that denies the local community access to forest resources has forced them to access the forest illegally. At the same time, the community has rarely benefitted from the forest management's activities in the forest, such as timber production. No revenues have been shared or channeled back into the community. The community has never participated in tourism activities, except that they are aware that tourists visit the forest park and the park gets revenue from this activity. All this has led to a continuing conflict between the forest managers and the community.

3. Methods

3.1. Statistical Choice Model

Discrete choice experiment (DCE) [59] has been commonly used in nature valuation [60]. The method gives insights into how consumers compromise amongst product attributes to make purchase decisions. Case-based hypothetical scenarios with several choice sets are presented to respondents in a survey to extract their preferences. Respondents are then asked to decide their preferences among two or more alternatives. It is possible to create different goods/services by varying attributes and their combinations to infer indirect utilities [61]. DCE has its root on McFadden's Random Utility Maximization theory [62], which states that respondent's utility function comprises deterministic (observable) component (V) and a stochastic (unobservable) component (ϵ):

$$U_{ijt} = V_{ijt} + \epsilon_{ijt} = \beta X_{ijt} + \eta_i X_{ijt} + \epsilon_{ijt},$$

where U_{ijt} describes the utility of a respondent i derives from choosing alternative j on choice situation t , β is the vector of preference parameters associated with the attributes, X_{ijt} is a vector of k observed attributes associated with alternative j , η_i is a vector of k individual-specific standard deviation parameters, and ϵ_{ijt} is a stochastic error term, independently and identically distributed (iid) according to a Gumbel distribution [59].

The utility function that an individual i gets from alternative j at choice situation t [63] is described by the following equation.

$$U_{ijt} = \begin{cases} V(\text{ASC}, X_{ijt}, \eta_i, \beta) + \epsilon_{ijt}, & \text{if } j = 1, 2; \\ V(X_{ijt}, \eta_i, \beta) + \epsilon_{ijt}, & \text{if } j = \text{status quo}; \end{cases}$$

where ASC (alternative specific constant) is a dummy variable taking the value 1 if the respondent is willing to choose the hypothetical alternative and move away from the status quo and taking value 0 in case they prefer the status quo, X_{ijt} is a vector of choice attributes, η_i is a vector of individual-specific standard deviation parameters, β is the vector of preference parameters associated with the attributes, and ϵ_{ijt} is an iid stochastic error term.

3.2. Design of the Choice Experiments (CE)

In this study, two-choice experiments were designed (Figure 2): One for assessing preferences for activities of community participation in tourism and the other for assessing preferences for activities of infrastructure improvement in the park.







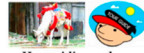

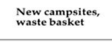




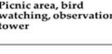




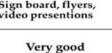


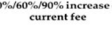


a)				b)			
Attributes	Option A	Option B	Status Quo	Attributes	Option A	Option B	Status Quo
Tour guiding	High  Community in professional tour guide	Medium  Community in traditional tour guide	Low  No community tour guide	Infrastructure service at park entrance	Very good  New guesthouse, visitors information center	Good  New guesthouse house	Poor  Old guesthouse
Horse riding	High  Horse riding and guiding	Medium  Horse riding	Low None	Accommodation within the park	Many  New campsites, waste basket	Few  New camp sites	Very few  Old camp sites
Handcraft and souvenir	High  Traditional cloth & handcraft	Medium  Handcraft	Low None	Nature view points	Many  Picnic area, bird watching, observation tower	Few  Bird watching and observation tower	Very few None
Photography service	High  Professional	Medium  Conventional	Low  None	Information to visitors	Full  Sign board, flyers, video presentations	Medium  Sign board, flyers	Minimum  Sign board
Benefit sharing	Very good  100% community sharing	Good  80% community sharing	Poor  20% community sharing	Price	30%/60%/90% increase on current fee	30%/60%/90% increase on current fee	No increase

Figure 2. Example of one of the choice cards for community participation (a) and infrastructure improvements (b) in tourism.

Activities for community participation in tourism were planned by the local community. Key informants and youth groups were engaged in group discussions to design activities for host community involvement in tourism. Prior to the discussion, a careful assessment of residents was carried out to identify the participants. More attention was given to the youth groups as they were more interested to be engaged in tourism. After in-depth group discussions, five activities were prioritized to be used as attributes for community participation in tourism. Language and lack of experience were mentioned as barriers for the community to be engaged in tourism. However, participants agreed that it can be resolved by short term trainings and skill practices. As such the CE presented different community participation scenarios to tourists, based on what the local community could offer and what they thought would be interesting for tourists.

Activities for infrastructure improvements in the park were identified from reviewing of guest record books for feedback and a previous tourism feasibility survey [64]. Tourists' feedback was summarized, as well as paraphrased, and those aspects mentioned frequently were selected and compared with the feasibility study results and the most commonly matched were used.

Attributes and levels in Table 1 were used to describe the sustainable tourism scenarios in the CEs. In total, five attributes were used for the preferences for community participation in tourism, while six attributes were used to assess preferences for infrastructural improvement. For the experimental design, a D-efficient design was opted for and Ngene software was relied on. Eighteen cards grouped in three blocks of six choice sets for the community participation CE, and twenty-four choice cards grouped in four blocks of six choice sets were designed for the infrastructure improvement CE. As such, seven choice sets, three from the community participation CE, and four related to the infrastructure improvement CE were presented to the tourists. An example of the choice cards can be found in Figure 1 and the description of the attributes and levels can be found in Table 1. Among the alternatives, a status quo that represents the current situation was included [65].

Table 1. Attributes and levels for community participation in tourism and infrastructure service improvement in the park.

Community Participation in the Park		Infrastructures Improvement in the Park	
Attributes	Levels and Its Description	Attributes	Levels and Its Description
Tour guiding: Local community giving guiding services in the forest park	High: Professional guide from the community Medium: Traditional guide from the community Low: Park guide	Accommodation: Availability of information center and guest house at the park entrance	Very good: New guest house and information center Good: New guest house Poor: Old guest house
Horse riding: Horse riding and guiding services by the community	High: Tour guide and horse ride service Medium: Horse ride service only Low: None	Facilities: Recreational conveniences like campsites and waste bin in the visitor's site	Many: New camp sites, waste baskets Few: New camp sites Very few: Old campsites
Handcraft and souvenir: Community supplying handmade items to visitors	High: Traditional clothes and handicraft Medium: Handcraft Low: None	Nature viewpoints: Location of picnic, bird watching, and observation tower areas	Many: Picnic area, bird watching, and observation tower Few: Bird watching and observation tower Very few: None
Photography service: Photography services provided by the local community	High: Professional photography Medium: None professional photography Low: None	Information to visitors: Written and oral information presented to visitors	Full: Interpretive sign board, flyers, video presentation Medium: Interpretive sign board, flyers Minimum: Interpretive sign board
Entrance fee: Visitors paying entrance fee to be in the park	30%, 60%, and 90% increase on the current entrance fee	Benefit-sharing: Benefit sharing channeled to the community	Very good: 50% of the tourism income share goes to the community Good: 20% income share to the community Poor: No share
		Entrance fee: Visitors paying entrance fee to be in the park	30%, 60%, and 90% increase on the current entrance fee

Currently, the only infrastructure at the park entrance is an old guest house and three campsites. There are no waste bins, nature viewpoints nor visitors' information centers in the camp sites and park center. The local community has never participated in any of the tourism activities. If involved, they could have engaged in tour guiding, horse riding, handicraft making, and photography. The price is the current entrance fee for the "status quo" and either a 30%, 60%, or 90% price increment for the alternative scenarios.

3.3. Data Collection

Data were collected during the peak tourist season (January–March 2014) to accommodate large and diverse groups of tourists (foreign, foreign residential, and local). The survey questionnaire had two parts: The respondents' profile, as well as their attitude, on the forest park services and two choice experiments (community participation in tourism and infrastructure improvement). First, a pilot study was carried out to test the questionnaire and validate the attributes and levels. Then, a total of 265 tourists, representing 3.5% of the annual visitors and 9.8% of the peak season visitors, participated in the survey.

Respondents were identified at random when they arrived then approached when they had returned from their visit and were either resting in their accommodation, in their car, or in the small cafeteria house located in the forest office. Trained enumerators interviewed tourists face-to-face. The order of the choice cards was changed while presented to the respondents to reduce a possible bias due to the influence of fatigue-oriented choices.

3.4. Empirical Analysis

A mixed logit model (MXL) that accounts for preference heterogeneity and then a latent class model (LCM) to assess respondents' preference were used. The MXL and LCM models are the best extensions of multinomial logit models (MNL) that can overcome the shortcomings of the assumption of independence from irrelevant alternatives (IIA). A mixed logit model [66,67] assumes heterogeneity to be continuous over the interval spanned by the distribution for the preference parameters [68]. When a random component is attached to the model attributes, the MXL enables preferences to vary across respondents. Except for the alternative specific constant (ASC) and price (entrance fee) attribute, which was kept fixed as it was usually common in nature valuations, all attributes were considered random and were assumed to have a normal distribution [69].

All attributes except entrance fee price were coded as dummy variables, taking value 1 for the respective attribute level and zero otherwise (Table 1). The ASC reflects the influence of choosing an alternative scenario over the opt-out. The alternative scenario represents the change in utility of respondents choosing to support the sustainable tourism development, which comprises local community participation in tourism and forest infrastructure improvement. This means the ASC captures the utility of moving away from the status quo [70].

The "mix logit" script applied on Stata software [71] for estimating the attribute coefficients by simulated maximum likelihood.

In LCM, individual behavior depends on observed attributes and on latent heterogeneity that varies by unobservable factors. The LCM is less flexible than the MXL model as it approximates the underlying continuous distribution with a discrete one. However, LCM provide relevant insights regarding preference heterogeneity in case of complex and multimodal distributions [68] as it helps to define groups of respondents based on their preference.

4. Results

4.1. Tourist Socioeconomic Characteristics

The socio-demographic characteristics of the sampled tourists are presented in Table 2. 265 tourists, which accounts for 3.5% of the total annual visitors in the Menagesha Suba Forest participated

in the survey. 240 (91%) of them completed the survey. 41.7% of them were local tourists, 40.3% were foreign residents and 18% were foreign tourists. Weak promotion of the park might have contributed to the low number of foreign tourists visiting the area, e.g., there is no website for the park and this gives limited opportunity for foreign tourists to be informed about the park. Local tourists were predominately male (75%) visitors with an average age of 32.7 years. About half of the foreign residents (49.5%) and foreign (55.8%) tourists were male with mean ages of 39.3 and 38.3 respectively. A majority of the foreign residents (62%) and local tourists (52%) reported that they heard about the Menagesha Suba Forest through word of mouth. Most of the foreign tourists depended on travel guide books (particularly “Lonely Planet”) and travel agencies for information about the forest.

Table 2. Sample characteristics of tourists.

Characteristics	All Tourist	Foreign Tourist	Foreign Resident	Local
Tourists profile		18% (<i>n</i> = 43)	40.3% (<i>n</i> = 97)	41.7% (<i>n</i> = 100)
Mean age in years and standard deviation	36.5 (10.9)	39.3 (9.7)	38.3 (9.3)	32.7 (10.6)
% Male	61	56	50	75
Finding about the forest: Word of mouth	52.7	28	62	52
Traveled from Addis Ababa	92.5	88	97	90
Full/half day stay	73	91	68	70

Most foreign tourists (88%), foreign resident (97%), and locals (90%) traveled from Addis Ababa to spend either a full or half day in the forest.

4.2. Results of the Choice Experiment

4.2.1. Mixed Logit (MXL) Model

The positive and significant outcome of the alternative specific constants (ASC) suggests that tourists preferred community participation in tourism and infrastructure development in the Menagesha Suba Forest (Table 3).

Many of the attributes of community participation in tourism (Table 3) expected to influence the choice behavior of the tourists, except tour guiding activity, were not chosen. This shows that tourists were not in favor of most of the activities proposed by the host community. Tour guiding service given by the host community is the only attribute that positively influenced tourists preference in the forest park.

Attributes of horse riding, handicraft, and photography services had no influence on the tourists choice behavior perhaps because: (i) Many tourists (45%) come only for trekking and hiking purpose and may not be interested in activities such as horse riding; (ii) there is an assumption by tourists that resources for handicraft making might be extracted from the forest and this could be a threat for forest conservation; and (iii) it is easy to access cameras with smart phone technologies, so photography services would no longer be chosen.

For the infrastructural improvement choice experiment, all the activities expected to influence the choice of respondents were statistically significant except nature viewpoints and benefit sharing (Table 3). Preferences were rather homogenous, with only accommodation service improvement, i.e., construction of new guest houses and an information center characterized by preference heterogeneity. Tourists were interested to keep the status quo so not to share revenues with the community. This might be because tourists preferred the community to be involved in tourism activities rather than directly receiving benefits.

Table 3. Parameter estimates of the choice model based on the mixed logit model for community participation in tourism and infrastructure improvement in the forest park. ASC are alternative specific constants.

Mixed Logit Model					
Community Participation			Forest Infrastructure Improvement		
	Coefficient Estimate	SD		Coefficient Estimate	SD
ASC	1.388 (0.43) ***		ASC	0.928 (0.28) ***	
Entrance fee	1.091 (0.28) ***		Entrance fee	−0.520 (0.18) ***	
Tour guide (High)	0.625 (0.25) **	−0.223 (1.23)	Accommodations Very good	0.658 (0.20) ***	1.929 (0.89) **
Tour guide (Medium)	0.642 (0.36) *	1.785 (1.14)	Accommodations Good	0.573 (0.16) ***	−0.078 (0.14)
Horse ride (High)	−2.857 (7.69)	40.973 (60.28)	Campsite Many	0.787 (0.19) ***	−0.004 (0.03)
Horse ride (Medium)	0.112 (0.22)	−0.004 (0.05)	Campsite Few	0.434 (0.17) ***	0.057 (0.15)
Handicraft (High)	0.204 (0.23)	0.002 (0.19)	Nature viewpoints Many	0.231 (0.14)	−0.289 (0.81)
Handicraft (Medium)	0.274 (0.36)	−1.146 (1.79)	Nature viewpoints Few	0.077 (0.14)	0.048 (0.08)
Photography (High)	0.097 (0.29)	0.114 (0.24)	Information to visitors Full	0.562 (0.17) ***	−0.045 (0.08)
Photography (Medium)	−0.137 (0.30)	−0.094 (0.24)	Information to visitors Medium	0.342 (0.16) **	−0.054 (0.21)
			Benefit sharing Very good	0.042 (0.14)	0.043 (0.30)
			Benefit sharing Good	−0.256 (0.18)	−1.159 (1.01)
Model summary statistics			Model summary statistics		
Sample size	240		Sample size	240	
Observation	2160		Observation	2880	
Waldchi2	48.44		Waldchi2	85.56	
<i>p</i>	0		<i>p</i>	0	
Log likelihood	−715.78		Log likelihood	−856.89	
Mcfadden' R ²	0.01		Mcfadden' R ²	0.003	

Standard errors in parentheses * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

4.2.2. Latent Class Model (LCM)

We used “logit” command [72] in Stata for estimating the LCM through the Expectation Maximization (EM) algorithm. Identification of the optimal number of classes is the first necessary step in LCM. One way to calculate the model for several classes, here from 2–5 classes is considering the Akaike information criterion (AIC) values and the Bayesian information criterion (BIC) values. In principle, the number of classes to be considered has to be determined by low AIC and BIC values, which indicate a better fit of the model. In our cases, however, the lowest AIC and BIC values falls either for three and five classes (Table 4). In the final decision regarding the classes, one should also consider the significance of parameter estimates [68]. Three classes were chosen for both choice experiments to carry out the LCM analysis, as the model based on five classes resulted in a high number of insignificant variables.

Table 4. Akaike information criterion (AIC) and Bayesian information criterion (BIC) results for determining the optimum number of classes that best fit the latent class model (N = 240). The values indicating the optimum number of classes for each indicator are in bold.

Number of Classes	Community Participation in Tourism		Infrastructure Improvement in the Park	
	BIC	AIC	BIC	AIC
2	1380.60	1448.86	1689.34	1789.75
3	1307.50	1299.19	1595.36	1598.32
4	1412.78	1493.45	1744.04	1819.61
5	1301.40	1305.49	1601.33	1579.44

Estimated attributes of three classes LCM results are presented in Table 5. The respondent’s origin was used as a membership function. For the community participation choice experiment, the mean highest posterior probability of the model was 0.93 whereas, for the infrastructure improvement experiment, it was 0.92. This suggests that most of the preference heterogeneities are captured. In the community participation choice experiment (Table 5), LCM has a better goodness of fit (Pseudo- $R^2 = 0.2$) than the MXL (Pseudo- $R^2 = 0.01$). The same trend holds in the infrastructure improvement choice experiment (Table 6), the LCM model presents better goodness-of-fit (Pseudo- $R^2 = 0.12$) compared with the MXL (Pseudo- $R^2 = 0.003$), which makes the LCM better in explaining the preference of the respondents.

Table 5. Latent class model (LCM) estimates for community participation in tourism parameters based on three classes.

Variables	Class 1A	Class 2A	Class 3A
	No Community Involvement Supporters	Moderate Community Involvement Supporters	Community-Based Tourism Supporters
ASC	−0.480 (0.858)	2.743 *** (0.646)	1.382 * (0.827)
Tour guide high	−1.068 (0.880)	0.256 (0.533)	0.361 (0.310)
Tour guide medium	0.0153 (0.782)	1.039 ** (0.410)	0.704 ** (0.325)
Horse ride high	0.00920 (0.722)	−0.0472 (0.440)	0.567 ** (0.279)
Horse ride medium	−0.881 (0.862)	−0.386 (0.533)	1.114 *** (0.320)
Handicrafts high	−1.102 (0.812)	−0.408 (0.328)	0.462 * (0.269)
Handicrafts medium	−1.924 ** (0.849)	−0.713 (0.561)	0.763 ** (0.308)
Photography high	0.350 (0.652)	−0.785 * (0.436)	0.760 * (0.405)
Photography medium	−2.559 (1.641)	−1.728 *** (0.592)	1.156 *** (0.444)
Entrance Fee	−0.165 (0.698)	0.0363 (0.237)	−0.467 * (0.280)

Table 5. Cont.

Variables	Class 1A	Class 2A	Class 3A
	No Community Involvement Supporters	Moderate Community Involvement Supporters	Community-Based Tourism Supporters
Class membership variables: Socio demographics			
Constant	−0.107 (0.610)	0.258 (0.889)	
Foreign resident	−0.229 (0.603)	0.232 (0.763)	
Local	−1.845 *** (0.667)	−1.616 * (0.842)	
Class share	18%	35%	47%
Observations	2,160		
Sample size	43	84	113
Log likelihood	−614.52		
Pseudo R ²	0.2		

Standard errors in parentheses * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Table 6. LCM estimates for park infrastructure improvement parameters based on three classes.

Attribute	Class 1B	Class 2B	Class 3B
	Infrastructure Development Supporters	Local Development Supporters	Infrastructure and Local Development Supporters
ASC	−1.5760 (−1.9656)	−3.2775 *** (−12.069)	3.2035 *** (0.4519)
Accommodation Very good	0.8429 (0.6454)	0.7036 (0.6187)	0.6071 *** (0.1349)
Accommodation Good	2.4241 *** (0.8818)	1.2471 ** (0.5736)	0.3580 *** (0.1279)
Facilities Many	3.9892 *** (−14.175)	0.7552 (0.5304)	0.4460 *** (0.1317)
Facilities Few	2.2162 ** (−10.791)	1.0995 ** (0.5104)	0.1916 (0.1266)
Nature viewpoints Many	−11.543 (0.7954)	0.1815 (0.5293)	0.2118 * (0.1255)
Nature viewpoints Few	−0.6255 (0.6594)	0.3190 (0.5414)	−0.1716 (0.1225)
Information to visitors Full	−1.3735 * (0.7231)	0.2189 (0.4950)	0.3614 *** (0.1238)
Information to visitors Medium	−0.3001 (0.8586)	0.0378 (0.4560)	0.1426 (0.1232)
Benefit sharing Very good	0.8284 (0.7930)	1.1365 ** (0.5506)	0.4623 *** (0.1335)
Benefit sharing Good	0.6865 (0.7886)	0.6891 (0.5410)	0.4709 *** (0.1281)
Entrance fee	1.6951 * (0.8737)	−0.3027 (0.2953)	−0.6016 *** (0.1125)
Class membership variables socio-demographics			
Constant	−1.4837 ** (0.5860)	−1.0315 ** (0.4111)	
Foreign resident	0.6341 (0.6315)	−0.2360 (0.5068)	
Local	−13.9797 (413.5673)	−1.4303 ** (0.5764)	
Class share (%)	12.7	14	73.3
Observations	2.880		
Sample size	30	34	176
Log likelihood	−752.32762		
Pseudo R ²	0.12		

Standard errors in parentheses * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Latent Class Model for Community Participation in Tourism

Tourists in class 1A (18% of the total) referred to as “no community involvement” supporters, preferred no or limited participation of the local community in tourism, suggesting that they prefer the existing situation (negative and insignificant ASC). Moreover, none of the tourists was interested in

any of the attributes of community participation in tourism. Instead, they preferred forest protection without the involvement of social actors. Local tourists were less likely to be part of this class.

Tourists in class 2A (35%) were “moderate community involvement supporters” and preferred community participation in tourism activities. However, they were not interested in any of the activities, except community members working as traditional tour guides. This suggests that many of the tourists’ preferences were not captured by the activities proposed by the locals. Local tourists were slightly less likely to be part of this group, while foreign residents were as likely as foreign tourists to be part of the group.

Tourists in class 3A (47%) were “strong community involvement supporters” and highly supported community participation in tourism as the ASC was positive and significant. All the parameters except “tour guiding-high” influenced the tourists’ preferences positively and significantly. Tourists in this class most likely constituted a significant number of local tourists as the local tourist were significantly and negatively associated with both class 1A and 2A.

Latent Class Model for Infrastructure Improvement in the Forest

Class 1B constitutes the lowest share of respondents (12.7%) “Infrastructure development supporters” compared with the other two classes. ASC is negative and not significant, suggesting that respondents of this class were not in favour of infrastructure improvement for tourism in the forest park. However, they had preferred the construction of a new guest house and a medium to strong improvement of facilities through the establishment of new campsites and waste bins. Unexpectedly, respondents of this class strongly rejected information sharing to visitors at the park entrance through flyers and video presentation. One reason could be that most surveyed tourists (73%) came for trekking and hiking and stayed for a half day or full day trip. They may have only needed a map of the forest trails and may not have had enough time for watching video presentations. Tourists in this class also seemed to support only a moderate improvement of infrastructures and were not supporters of the park’s revenue sharing to the local community.

Class 2B (14%) were “local development supporters”. The significant negative ASC implied that they showed lower interest for infrastructure improvement. They preferred the same parameters that positively influenced the choices of respondents in class 1B, except benefit sharing to the local community. Local tourists were less likely to be part of this class as indicated by the class membership parameter estimates. They preferred the forest in the status quo with few improvements of infrastructure yet sharing benefits to the local community. They considered the social aspect of tourism development important.

Class 3B (73.3%) were “Infrastructure and Local Development Supporters”. They seemed to have strong preferences for infrastructure improvement for tourism development (ASC is positive and significant). Many of the activities suggested were significantly positive except facilities improvement, nature viewpoints, and minimum information to visitors. Evaluation of the choice behavior of class 3B respondents suggested that they were strong advocates of infrastructure development, as well as community participation in tourism, as they attached high importance to benefit sharing with the local community.

After respondents with similar choices were assigned to their respective latent classes, each class was defined by their socioeconomic background for both community participation in tourism and infrastructure improvement choice experiments (Table 7). Statistical comparison between classes was made based on two-sample t-tests run by excluding one class each time.

Table 7. Socio-demographic profiles of the respondents for each latent class.

	Community Participation			Infrastructure Improvement		
	Class 1A	Class 2A	Class 3A	Class 1B	Class 2B	Class 3B
Sample size, N	43	84	113	30	34	176
Gender (% of male)	54.6 (0.03)	64.3 (0.02) ^a	61.9 (0.01)	58.9 (0.01)	54.8 (0.03)	69.8 (0.07) ^c
Age (mean age in years)	37.6 (0.54)	38.5 (0.45)	35 (0.31) ^b	37.6 (0.27)	36 (0.49)	34.3 (0.34) ^b
Undergraduate degree	27 (0.02)	33 (0.02)	44 (0.02) ^b	37.5 (0.03)	25.7 (0.02)	40.8 (0.01) ^c
Graduate level degree	57 (0.02) ^b	57 (0.01) ^c	42 (0.02)	59.4 (0.02) ^b	65.7 (0.02) ^c	44 (0.004)
Monthly household net income (\$)						
<1000 USD	18 (0.02)	28 (0.02)	44 (0.01) ^{b,c}	8 (0.01)	9 (0.20)	68.3 (0.02) ^{b,c}
1000–3000	25 (0.02)	24 (0.02)	21 (0.01)	30 (0.02)	23 (0.02)	30.2 (0.02)
>3000 USD	35 (0.02) ^b	34 (0.01) ^c	24 (0.01)	35 (0.03)	45 (0.02) ^a	
I don't want to give this information	22 (0.02) ^{a,b}	14 (0.02)	11 (0.01)	27 (0.06) ^b	23 (0.02)	1.5 (0.01)
Tourist profile						
Foreign tourist	27.3 (0.02) ^b	21.4 (0.02)	18.3 (0.01)	18.8 (0.02)	25.7 (0.02) ^{a,b}	16.2 (0.01)
Foreign resident	47.7 (0.03) ^b	41.4 (0.02)	29.2 (0.01)	59.4 (0.03) ^b	42.9 (0.03)	36.4 (0.01)
Local	25 (0.02)	37.14 (0.02)	52.5 (0.01) ^b	21.8 (0.02)	31.4 (0.02)	47.4 (0.01) ^{b,c}
Purpose of the visit						
Trekking/hiking	43.2 (0.02)	48.6 (0.02) ^{a,b}	42.9 (0.01)	48 (0.02)	48.4 (0.03)	35 (0.02) ^{b,c}
Camping	20 (0.03)	13.6 (0.01)	22.1 (0.02)	27.5 (0.06)	18 (0.02)	19.9 (0.02)
Others (trees, birds, wildlife)	36.8 (0.03)	37.8 (0.02)	35 (0.01)	24.5 (0.01)	33.6 (0.04)	45.1 (0.02) ^{b,c}

Significant levels: At 0.05%. ^a indicates significant difference between class 1 and 2, ^b indicates significant difference between class 1 and 3, ^c indicates significant difference between class 2 and 3.

The result of class based socioeconomic analysis for community participation in tourism showed that class segments of no community involvement (class 1A) and moderate community involvement (class 2A) supporters shared similar socioeconomic backgrounds (Table 7). They were older, highly educated, wealthier, and foreign or foreign resident tourists. The younger, less educated, lower income, and local tourists supported community involvement in tourism (class 3A).

For infrastructure improvement CE, highly educated, wealthier, foreign, and foreign resident tourists preferred infrastructure improvement (class 1B) and local community development (class 2B). But younger, lower income, undergraduate degree holders and local tourists supported both infrastructure improvement and local community development (class 3B).

A significant number of male visitors were concentrated in class 2A (64.3%) and class 3A (61.9%). Class 3B was represented with significantly higher numbers of male (69.8%) visitors compared to class 1B and class 2B.

Significant numbers of tourists in class 3A and B were young compared to the rest of the classes in both CEs. Foreign resident tourists were concentrated in class 1A (27.3%) and class 2B (25.7%). The foreign residential tourists were significantly contained within class 1A and B. Local tourists were significantly represented in class 3A and B. From the class socioeconomic analysis, many tourists came to trek rather than to camp.

Analyzing respondents' common preferences for scenarios of the two strategies provided some insights about the perspectives of tourists towards tourism development (Table 8). Significant number of respondents (9.17%) that supported no community involvement in tourism also supported local developments, such as engaging the local community as direct beneficiaries. These tourists significantly tended to be either foreign (2.5%) or foreign residents (4.6%). Significant number of tourists (7.5%) commonly selected no community involvement and infrastructure and local development and these were significantly foreign residence and local tourists. On the other hand, 4.2% of moderate community involvement supporters inclined to prefer infrastructure and local development as well. Significant (2.1%) of them represent local tourists.

Table 8. Tourists' common preference to the activities of community participation in tourism and infrastructure improvement across the latent classes. Different letters indicate significant differences between the preferences of tourist in the three categories of the community participation and infrastructure improvement activities following independent two samples *t*-test (comparison of two combination of classes at a time).

Community Participation in Tourism	Infrastructure Development		
	Infrastructure Development Supporters	Local Development Supporters	Infrastructure and Local Development Supporters
No community involvement supporters	3.33 (0.18)	9.17 (0.29) ^a	7.5 (0.26) ^b
Foreign	0.83 (0.09)	2.5 (0.16) ^{a,c}	0.42 (0.06)
Foreign resident	2.5 (0.16)	4.58 (0.21) ^a	4.58 (0.21) ^c
Locals	0	2.08 (0.14)	2.5 (0.16) ^{b,c}
Moderate community involvement supports	2.5 (0.16)	1.25 (0.11)	4.17 (0.2) ^{b,c}
Foreign	1.25 (0.11)	0.42 (0.06)	0.83 (0.09)
Foreign resident	0.83 (0.09)	0.42 (0.06)	1.25 (0.11)
Locals	0.42 (0.06)	0.42 (0.06)	2.08 (0.14) ^{b,c}
Community-based tourism supporters	7.5 (0.26)	12.5 (0.33) ^a	53.33 (0.5) ^{b,c}
Foreign	0.42 (0.06)	1.25 (0.11)	8.75 (0.28) ^{b,c}
Foreign resident	4.58 (0.21)	5.83 (0.23)	17.5 (0.38) ^{b,c}
Locals	2.5 (0.16)	5.42 (0.23)	27.08 (0.44) ^{b,c}

Significant levels at = 0.05% (Numbers with letters shows significance difference between preferences of activities supporters whereas, numbers both in bold and with letters shows significant difference between tourists' profiles; Foreign, foreign resident, locals). ^a indicate significant difference between class 1 and 2, ^b indicates significant difference between class 1 and 3, ^c indicates significant difference between class 2 and 3.

12.5% of tourists commonly supported community-based tourism and local development, where significant numbers were foreign resident tourists (5.8%). More than half (53.3%) of tourists that were identified as community-based tourism supporters chose activities that were preferred by tourists, identified as infrastructure and local development supporters. This implies that more than half of the tourists surveyed supported community participation in tourism and infrastructure development as a strategy for sustainable tourism development. Tourists of all the three profiles i.e., foreign (8.8%), foreign residents (17.5%), and locals (27.1%) were significantly represented.

5. Discussion

The results of the choice experiments suggested that tourists in general supported sustainable tourism development through community participation in tourism and infrastructure improvements (Tables 5 and 6). However, tourists were not in favor of most activities put forward by the host community. This confirms the necessity to involve all stakeholders groups in planning activities for sustainable tourism. While the participation of the host community in the design of sustainable tourism activities is considered a bottom up approach; tourists' perceptions should also be considered in scenarios of community participation in tourism [73]. Regardless of the mismatch in preferences, the inclusion of the host community in the planning of sustainable tourism activities is still a crucial component of sustainable tourism. Saufi [74] suggested that involvement of destination residents, particularly in developing countries, is critical to the success of tourism development.

The approaches for infrastructure improvement were formulated based on tourist feedbacks retrieved from guest books in the park and this confirmed strong preferences for such improvements. This positive preference suggested the current infrastructure services in the forest park needed improvement and this was one of the bottlenecks of sustainable tourism development, as also confirmed by Carter [75] elsewhere.

Though preferences for infrastructure activities were positive, there were differences among tourist profiles (locals, foreign resident, and foreign tourists) and other socioeconomic backgrounds. Preferences within stakeholder groups are thus not homogeneous and this should be accounted for in

sustainable tourism planning. The socioeconomic background of visitors across latent classes informed that tourists coming to the forest park tended to be highly educated and earn moderate income (Table 7). Knowledge and income have been reported as determinants of environmentally responsible behavior [76,77] in addition to travel experiences [78]. Older, highly educated, wealthier tourists, who were typically foreign and foreign residents, supported no or only a slight change in local community involvement in tourism. Significant number of local tourists, who were younger, less educated, and with low income preferred community-based tourism and almost all proposed infrastructure improvements. Locally, activities that facilitate tourism development are usually viewed as factors contributing to the quality of life of the community and environmental conservation [79]. Preference across the latent class model seemed to be tourist profile specific, which implied that tourists' origin might be one of the determinants of different perceptions about sustainable tourism [80]. Assessing preference heterogeneity among stakeholder groups allows to better incorporate stakeholders' views in sustainable tourism planning and demonstrates the potential to realign stakeholder involvement in the planning of sustainable tourism [81].

The practice of involving different stakeholders (i.e., host communities and tourists) in sustainable tourism planning is rarely used in developing countries and this has been an obstacle for effective sustainable tourism implementation [70]. It is believed that input from host community and stakeholders' participatory approach in designing and planning of sustainable tourism activities can assist managers and policy makers. This research illustrated that there was a mismatch between tourists' preferences and the activities designed by local community. It indicated that the local community had little knowledge about the needs of tourists and the tourism sector, probably because of their previous limited involvement in the tourism sector. This is in line with Cole (2006) [82] who reported that in addition to host community involvement, adequate knowledge about tourism empowers a host community engagement in tourism development. Interactions and experiences might influence the hosts' attitudes [80] and affect residents' perceptions of tourism [83]. A high level of community participation is thus needed to realize the basic needs and expectations of a community in the sustainability context of tourism [84] and achieve political, social, economic, cultural and environmental sustainability [85]. Considering the above indicated issues might resolve the host community participation inhibitors (conflict of interest over resource usage, inadequate participation of the locals, unfair benefit sharing, and the inexperience of locals with tourism) in sustainable tourism development [54].

Overall, in line with stakeholder theory, this research confirms that sustainable tourism planning should be inclusive of all stakeholders at least, host community and tourists. After all, tourism is all about the meeting of two populations segments: Residents and tourists [86]. This did not seem to be the case in the study area as such, where residences were less informed about and involved in the tourism activities in their areas. Attention therefore must be paid to the planning and designing of any tourism activities to ensure mutually beneficial development that could resolve conflicts of interest among stakeholders.

6. Conclusions

This study explored the potential of sustainable tourism planning with the involvement of stakeholders using the application of a choice experiment in the Menagesha Suba Forest, in the central highlands of Ethiopia. Tourists were presented with two tourism planning activities (community participation in tourism and infrastructure improvement). There was a mismatch between the preferences of tourists and the proposed activities presented by the local community for their engagement in tourism. The high level of previous exclusion has meant that the community is unaware of tourists' preferences. This calls for the involvement of different stakeholder groups in sustainable tourism planning. It also urges to stimulate interactions between local communities and tourists as this can foster local communities' knowledge about tourism, that can in turn empower a host community engagement in tourism development. Furthermore, tourists' preferences varied across

their origin (foreign and foreign resident tourists inclining to keep the status quo with a slight change, while locals wanting a high level of changes in infrastructure improvement), implying that tourists had different level of awareness towards tourism sustainability. Moreover, this could be altered by interactions between host communities and tourists. Our study demonstrates that inclusive stakeholder engagement in the initial phase of tourism planning enables to identify conflicting preferences among and within stakeholder groups at an early stage.

Regardless of the mismatch in preferences, involvement of the host community in sustainable tourism planning is still crucial. The importance of such community involvement is one of the components that conventional tourism could negatively affect, in addition to environment. We acknowledge that designing the activities for community engagement should be inclusive of the interest of tourists, in terms of services they would have liked to receive from the local community. Our research illustrates that action is needed to facilitate a means whereby the local community can access and understand the interest of tourists and the tourism sector. This could be realized through awareness creation activities regarding tourists' preferences within host communities and interactions between different stakeholder groups (i.e., tourists and local communities) prior to planning and development of any tourism activities.

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